

City of Alexandria Storm Sewer Capacity Analysis

Task Order 2B – Cleaning & CCTV (King St, Beauregard St, and Walter Reed Dr)

PREPARED FOR: CH2M HILL

PREPARED BY: Baker

DATE: April 2, 2012 (Revised Aug 7, 2012)

Field Work Summary (February 24, 2011)

VPS performed CCTV inspections of the storm pipes at the intersection of King Street and Beauregard Street/Walter Reed Drive. VPS used an arbitrary naming convention to label the starting and ending structures. Therefore, Baker has created a conversion table to link the manhole labels in VPS' report to the correct Structure IDs as found in the City's GIS. An aerial map of the City's GIS has been marked to show which pipes were inspected and is included in this Memorandum.

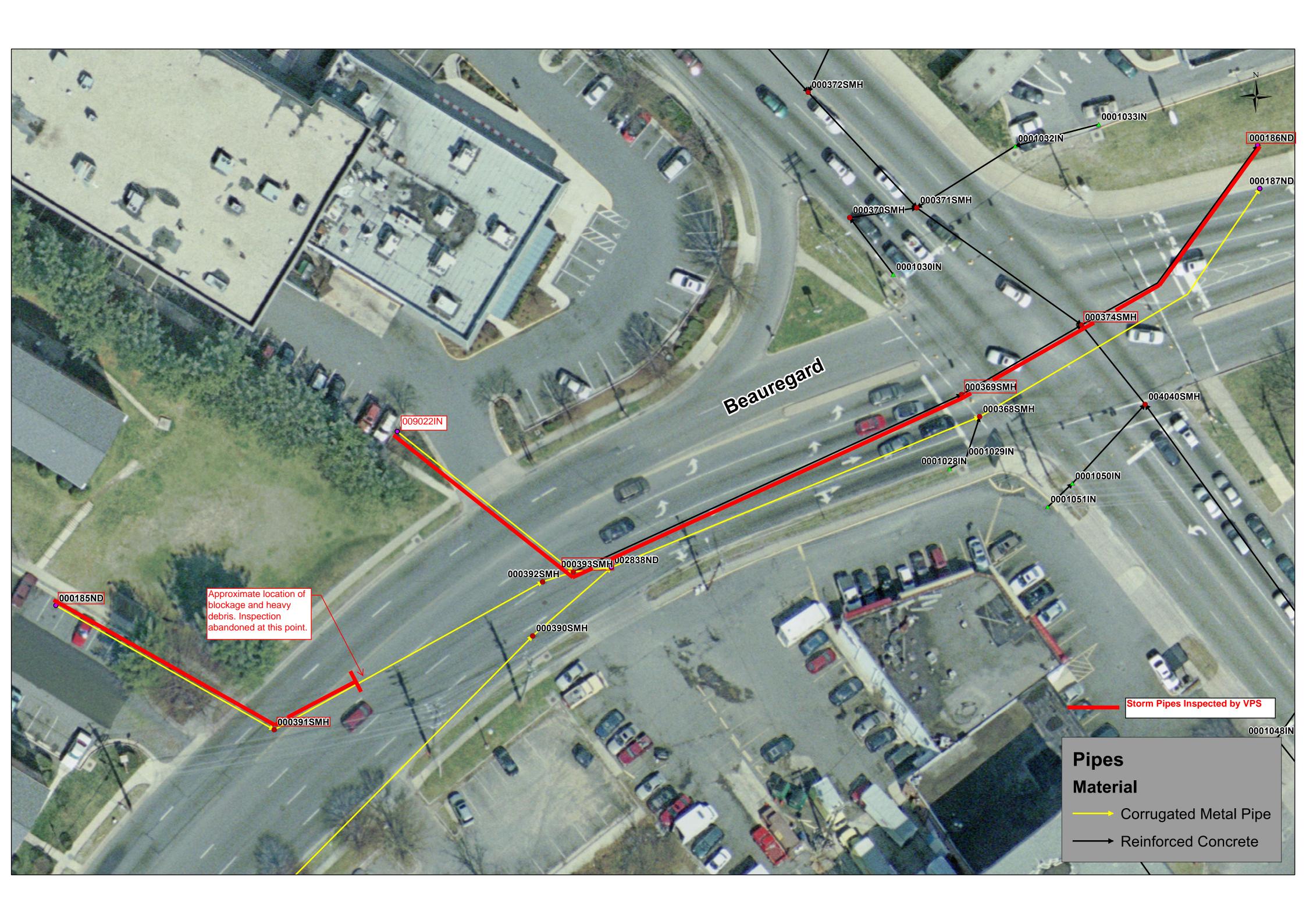
| VPS Structure No. (From Report) | City GIS Facility ID |
|------------------------------------|----------------------|
| 1 | 000185ND |
| 2 | 000391SMH |
| 2A | 009022IN |
| 3 | 000393SMH |
| 4 | 000369SMH |
| 5 | 000374SMH |
| 6 | 000186ND |

The inspection of the pipe connecting structures 000391SMH and 000393SMH was not completed beyond 34 feet downstream from 000391SMH due to the presence of heavy debris that could not be cleared using regular cleaning methods. The blockage consisted of bricks, concrete slabs, and other metal objects. Removal will require heavy cleaning methods using mechanical tools and manned entry to the pipe. The remaining pipes showed some minor defects, such as cracks or fractures, but otherwise showed to be in good condition. In addition, VPS inspected an additional 100 foot long section of 84-inch pipe (000393SMH – 009022IN) that was not identified in the City's GIS. This pipe did not show any defects.

During the inspection activities, VPS cracked the lid of 000185ND while attempting to dislodge it. VPS placed a temporary cover with cones over the opening while a replacement was ordered. The new lid has since been installed.

Condition Assessment Summary

Field inspection was completed based on the rating process in the SCREAM database. VPS did not record any significant defects with the inspected structures. Minor deteriorations of manhole structures were observed; cracked and/or corroded frame base seal, chimney, and chamber. Manhole and Lamping inspection forms are included in Appendix A.



APPENDIX A MANHOLE LAMPING AND INSPECTION FORMS

| Alexandria Ma | anhole and Lamping | nspection Form | Basin No. FOUR | MILE RUN | l l | Manhole N | 000391SMH | |
|------------------------------------|---|----------------------|--|----------|-------------------------|----------------------|--|--------------------|
| Inspection Informat | | Manhole Information | | ✓ Con | nplete | Quick | Incomplete | Returned |
| Insp Date/Time | 3/12/2012 | Structure Type | Manhole Standard | L | | Setting Infor | | |
| Crew | Truck 1 | Coating/Liner Type | None - No Coating/Lining | | Surface | _ | Asphalt | |
| Crew Affiliation | Field1 | Address 3400 | N BEAUREGARD ST | | affic Volu | | Medium/Fair | |
| Permit No | V08093003 | City, State, Zip | Alexandria,VA 00000 | | affic Type | | 3 - 4 Lane | |
| Insp Purpose | Routine assessment/asse | Location Code | Light Highway Rural Street | | ather | • | Dry | |
| Inspection Type | Surface Inspection | X 11879173.8 | Y 6992415.294 | | ound Cor | nd | Dry | |
| Why not Inspected | | Elevation | 140.79 | | Juna Ooi | i u | Diy | |
| Owner Information Project No. | | Grade (0, + , -) | | Manh | nole-Uppe | er | 0 | 1 2 3 4 |
| Project No. 2 | | Flow Type | | | | eterioration w | videspread 🗹 | |
| Project Name | | DS pipe length(ft) | | Manch | | ting/lining de | eterioration | |
| Map No | | Depth to MH Invert(f | | | nole-Lowe rrosion de | er eterioration w | videspread | |
| Use of Sewer | Stormwater | Pre-cleaning | No Pre-Cleaning | | | ting/lining de | | |
| | stment Ring / Cover Ir | sert | Frame cont. | | | Char | nber (Wall) c | ont |
| No Cover | ✓ No Cover Insert | Frame | 0 1 2 | 3 4 | Chambe | | | 1 2 3 4 |
| No Cover Gasket | | Ding | ken / deteriorated | | | | Cracked | |
| | | 001100 | ed, pitted,spalled 🗸 📗 🔛 s or Broken Bolts 🗸 📗 | HHI | | | pitted,spalled Iortar missing | |
| Cover Type | Solid | Wildshig Doll | Offset 🗸 | | Br | | ed or missing | |
| Cover material | Cast Iron | | Missing | | | Ro | oots Intrusion | |
| | | Frame Base Sea | al 0 1 2 ded / deteriorated | 3 4 | | ı | Grease 🗸 Jtility conduit | HHHH |
| 0 51 (6) | | | ed, pitted,spalled | | | | Offset or Seal | |
| Cover Diam(ft) | 24 | | Roots Intrusion | HHI | | 1.26.1 | Collapse 🗸 | |
| Cover Width(ft) | (') 0.05 | | I/I evidence ✓ | | | Lift hole p | plugs missing 🗸 | |
| Cover Thickness | ` ' | | ey (Shaft) / Grade Rir | ng | | | Bench | |
| No of vent holes | | Re | educer (Cone, Slab) | | | | Steps | |
| Avg vent hole dia | | | Chamber (Wall) | | | Ch | nannel (Inver | ct) |
| Adj ring height(in Cover bear surf | · 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | No Chimney (| | 01.13 | No E | Bench | ✓ No Ste | eps |
| Ponding depth(ft | | No Chimney (| Shaft) No Reducer (Cone | e, SIAD) | No (| Channel | | ommon MH Partition |
| Tributary area(so | · | | iterial Diam in Width in D | Denth ft | | | | |
| Tributary area(so | 1") | IVIE | iteriai Diamini Widinin L | Эерин н | | | | |
| Cover | 0 1 2 3 | 4 | | | Surch | arge Depth | h(ft) | I |
| | or Displaced 🗹 🗌 📗 | Chimney 5 | [6 | 6.8 | | | ` ' | |
| Cracked / | deteriorated 🗸 📗 📗 | | | | Bench | material | Precast Co | oncrete |
| Corroded. | Fit in Frame 🗹 📗 📗 pitted,spalled | | 1 11 11 | | Chann | el material | Precast Co | oncrete |
| | Surface wear 🔽 🔲 🔲 | Chamber 5 | 4 | 4.5 | Bench | ioi inatona | 0 | 1 2 3 4 |
| Missing Bolts or | Broken Bolts 🗹 🗌 📗 | Chimney (Shaft | 0 1 2 | 3 4 | Belicii | | Cracked 🗸 | |
| | | | Previous rehab | | | | pitted,spalled | |
| | | Corred | Cracked | HHI | Br | | lortar missing determissing determissing determined determined | HHHH |
| | | Corrod | Mortar missing | | | | oots Intrusion | |
| | | Bricks disp | placed or missing 🗹 🗌 | | | | Grease 🗸 | |
| | | | Roots Intrusion | HHI | | Deb | ris/deposition I/I evidence | HHHH |
| | | | I/I evidence | | Channe | ı | 0 | 1 2 3 4 |
| | | | | | | 0 | Cracked 🗸 | |
| | | | | | | | pitted,spalled Iortar missing | HHHH |
| | | | | | Br | | ed or missing | |
| | | | | | | Ro | oots Intrusion Grease | HHHH |
| Frame | e and Frame Seal | | | | | Deb | Grease ris/deposition | |
| ☐ No Frame | ☐ No Frame Base S | Seal | | | Pipe | segment cra | icked, spalled 🔽 | |
| | | | | | | H | Hydraulic flow 1/I evidence | HHHH |
| Frame material | 3 | | | | | | WI GAIGGIIGE | |
| Frame bearing su | urf diam(in) 24 | | | | | | | |
| Frame bearing su | ırf width(in) | | | | | | | |
| Frame bearing su | urf dwell(in) 1 | | | | | | | |
| Frame offset dist(| (in) | | | | | | | |
| Frame depth(in) | 8 | | | | | | | |
| Frame seal mater | rial 39 | | | | | | | |
| Clear opening dia | am(in) 22 | | | | | | | |
| Clear opening wid | | | | | | | | |



| New N/A Basin Connecting MH F | low Direction | Pipe Type | In Drop E | x Drop | Depth | Shape | Matl | Dia |
|-------------------------------|---------------|-----------|-----------|--------|-------|----------|---------------------|-----|
| FOUR 000185ND MILE RUN | In Out | Storm | | | 13.7 | Circular | Corrugated Metal | 54 |
| Pipe Seal Condition | Severity | | | | | | | |
| | 0 1 2 3 4 | ļ | | | | | | |
| I/I evidence | | | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| Pipe cracked | | | | | | | | |
| Roots Intrusion | | | | | | | | |
| New N/A Basin Connecting MH F | low Direction | Pipe Type | In Drop E | x Drop | Depth | Shape | Matl | Dia |
| FOUR 000392SMH MILE RUN | In 🗹 Out | Storm | | | 13.7 | Circular | Corrugated Metal | 57 |
| Pipe Seal Condition | Severity | | | | | | | |
| | 0 1 2 3 4 | ļ | | | | | | |
| I/I evidence | | | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| Pipe cracked | | | | | | | | |
| Roots Intrusion | | | | | | | | |



Basin No. FOUR MILE RUN

Manhole N 000391SMH

Photos

Photo Name Description 000391SMH_Cover_20120312_6111.JPG

PhotoType

Old Photo Name 0908401J.JPG

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000391SMH_Chamber_20120312_6113.JPG

Chamber

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000391SMH_General_20120312_6114.JPG

SIZE OF INCOMING PIPE FROM 000185ND

General

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INCOMING PIPE FROM 000185ND

General

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INCOMING PIPE FROM 000185ND

General

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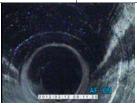


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INCOMING PIPE FROM 000185ND

General

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Basin No. FOUR MILE RUN

Manhole N 000391SMH

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INCOMING PIPE FROM 000185ND

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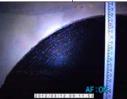


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SIZE OF OUTGOING PIPE TO 000392SMH

General

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OUTGOING PIPE TO 000392SMH

General

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OUTGOING PIPE TO 000392SMH

General

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OUTGOING PIPE TO 000392SMH

General

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OUTGOING PIPE TO 000392SMH

General

0912301J.JPG



| Alexandria Mar | nnole and Lamping ir | isped | ction Form | Dasiii ivo. | FOUR | WILE KUI | N | Iviai ii iole i | 10 0003933 | VIII | | |
|-----------------------------------|--------------------------------------|--------------------|-------------------------------------|------------------------------------|--------------------|-----------|--------------|-----------------|-----------------------------------|---------------------------|-------------|----------|
| Inspection Informatio | | Manh | ole Information | | | ✓ Cor | mplete | Quick | Incom | plete | Return | ned |
| msp bate/ mile | 3/9/2012 | Struc | cture Type | Manhole Standard | | Ins | spection | Setting Info | rmation | | | |
| Ciew | ruck 1 | Coat | ing/Liner Type | None - No Coating/I | Lining | | H Surfac | _ | Asphalt | | | |
| Crew Anniation | Field1 | Addr | | KING ST | | | affic Vol | | Medium/F | air | | |
| i eminimo _ | /08093003 Routine assessment/asse | • | State, Zip | Alexandria,VA 0000 | | | affic Typ | | 3 - 4 Lane | | | |
| Insp Purpose | | | tion Code | Light Highway Rura | | | eather | | Dry | | | |
| Inspection Type Why not Inspected | Surface Inspection | X | 11879307.78 | Y 6992485.9 | 184 | Gr | round Co | ond | Dry | | | |
| Owner Information | | Eleva | | 139.34 | | | | | , | | | |
| Project No. | | | le (0, + , -) | / | | Man | hole-Upp | er | | 0 1 | 2 3 | 4 |
| Project No. 2 | | | Type | | | C | | | widespread | V | HH | \vdash |
| Project Name | | | ipe length(ft) h to MH Invert(ft | 15.0 | | Man | hole-Low | | deterioration | 0 1 | 2 3 | 4 |
| Map No | | | cleaning | No Pre-Cleaning | | Co | | | widespread | | | |
| Use of Sewer | Stormwater | F16-0 | Diearning | No Fie-Cleaning | |] | Co | ating/lining c | deterioration | | | Ш |
| Cover / Adjust | ment Ring / Cover Ins | sert | | Frame cont. | | | | | mber (Wa | | | |
| No Cover | ✓ No Cover Insert | | Frame | 0 en / deteriorated ✓ | 1 2 | 3 4 | Chamb | er | Cracked | 0 1 | 2 3 | 4 |
| ✓ No Cover Gasket | No Cover Adjustment F | Ring | | ed, pitted, spalled | | | | Corroded | l, pitted,spalled | | | |
| Cover Type | Solid | | Missing Bolts | or Broken Bolts | | | | 1 | Mortar missing | y 🗹 🗌 | | |
| Cover material | Cast Iron | | | Offset ✔ [Missing ✔ [| $\dashv \vdash$ | HHI | E | | ced or missing Roots Intrusior | | HH | |
| | | | Frame Base Sea | 0 | 1 2 | 3 4 | | | Grease | · 🗹 🗌 | | |
| | | | | | | \square | | la ind | Utility conduit | | \square | ļН |
| Cover Diam(ft) | 24 | | Corrode | ed, pitted,spalled Roots Intrusion | | HHI | | Joint | t Offset or Sea Collapse | | $H \vdash$ | H |
| Cover Width(ft) | | | | | | | | Lift hole | plugs missing | g 🗹 🗌 | | |
| Cover Thickness(i | in) 3.25 | | Chimn | ey (Shaft) / Grad | de Rin | ıg | | | I/I evidence | | | |
| No of vent holes | 2 | | Re | ducer (Cone, SI | ab) | | | | Bencl | | | |
| Avg vent hole dia(| (in) 1 | | | Chamber (Wall) | | | | | Steps | | | |
| Adj ring height(in) | | | ✓ No Chimney (S | | | | ✓ No | Bench | hannel (l | nvert) No Steps | | |
| Cover bear surf di | am/width | | No Chimney (S | Shaft) No Redu | ıcer (Cone | e, Slab) | | Channel | | No Commo | n MH Partit | tion |
| Ponding depth(ft) | | | | | | | V 110 | Onao. | V | 140 00 | | |
| Tributary area(sq | ft) | | Ma | terial Diam in Wid | Ith in D | Depth ft | | | | | | |
| Cover | 0 1 2 3 | 4 | | | | | | . 5 | | | | |
| | r Displaced 🗸 📗 🔲 | | Chimney 5 | | 2 | 2.2 | Surc | harge Dep | otn(tt) | | | |
| | deteriorated 🗸 🗌 📗 | | , | | | | | | | | | |
| Corroded, pit | Fit in Frame 🗸 📗 📗 tted,spalled 🗸 | H | | | | | | | | | | |
| | urface wear | | Chamber 9 | | 1 | 3.7 | | | | | | |
| Missing Bolts or B | roken Bolts 🗹 📙 📙 | | Chimney (Shaft) | 0 | 1 2 | 3 4 | | | | | | |
| | | | | Previous rehab Cracked | | HHI | | | | | | |
| | | | Corrode | | | | | | | | | |
| | | | | Mortar missing | | | | | | | | |
| | | | Bricks disp | laced or missing Roots Intrusion | $\exists \exists$ | HHI | | | | | | |
| | | | | Collapse 🗸 | | | | | | | | |
| | | | | I/I evidence | ✓ | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | and Frame Seal | | | | | | | | | | | |
| No Frame | No Frame Base Se | eal | | | | | | | | | | |
| Frame material | 3 | | | | | | | | | | | |
| Frame bearing surf | | $-\parallel$ | | | | | | | | | | |
| Frame bearing surf | ` ' | $-\parallel$ | | | | | | | | | | |
| Frame bearing surf | | - | | | | | | | | | | |
| Frame offset dist(in | | $\dashv \parallel$ | | | | | | | | | | |
| Frame depth(in) | 8 | $-\parallel$ | | | | | | | | | | |
| Frame seal materia | | $-\parallel$ | | | | | | | | | | |
| Clear opening diam | | $-\parallel$ | | | | | | | | | | |
| Clear opening widtl | ` ' | $-\parallel$ | | | | | | | | | | |



| Alexandria Manhole and Lamping Inspection Form | Basin No. FOUR MILE RUN Manhole No 000393SMH | |
|--|--|---|
| | Notes / Sketch | |
| | | |
| | | - |

| New N/A Basin Connecting MH | Flow Direction | Pipe Type | In Drop E | v Dron | Depth | Shape | Matl | Dia |
|--|----------------|-----------|-----------|---------|---------------|-------------------|---------------------|-----------|
| | ☐ In 🕡 Out | Storm | | | 0 | Circular | Reinforced | 60 |
| Pipe Seal Condition | Severi | tv | | | | | Concrete | |
| i ipe deal condition | | 3 4 | | | | | | |
| I/I evidence | V | | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| Pipe cracked | V | | | | | | | |
| Roots Intrusion | | | | | | | | |
| New N/A Basin Connecting MH | Flow Direction | Pipe Type | In Drop E | x Drop | Depth | Shape | Matl | Dia |
| FOUR 000392SMH MILE RUN | ✓ In ☐ Out | Storm | | | 15.3 | Circular | Corrugated Metal | 60 |
| Pipe Seal Condition | Severi | • | | | | | | |
| | 0 1 2 3 | 3 4 | | | | | | |
| I/I evidence | | | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| Pipe cracked | ✓ □ □ [| | | | | | | |
| Roots Intrusion | | | | | | | | |
| New N/A Basin Connecting MH | Flow Direction | Pipe Type | In Drop E | x Drop | Depth | Shape | Matl | Dia |
| FPUR 002029ND MILE RUN | ✓ In ☐ Out | Storm | | | 15.9 | Circular | Corrugated Metal | 84 |
| | | | | | | | | |
| Pipe Seal Condition | Severi | ty | | | | | IIII | |
| - | | ty 3 4 | | | | | Mod | |
| I/I evidence | | - | | | | | iiii | |
| - | 0 1 2 | - | | | | | into Co. | |
| I/I evidence | 0 1 2 3 | - | | | | | into sa | |
| I/I evidence Mortar, "boot", or other seal | 0 1 2 3 | - | | | | | into Co. | |
| I/I evidence Mortar, "boot", or other seal Pipe cracked | | - | In Drop E | x Drop | Depth | Shape | Matl | Dia |
| I/I evidence Mortar, "boot", or other seal Pipe cracked Roots Intrusion New N/A Basin Connecting MH | | 3 4 | In Drop E | ix Drop | Depth 15.9 | Shape Circular | | Dia 60 |
| I/I evidence Mortar, "boot", or other seal Pipe cracked Roots Intrusion New N/A Basin Connecting MH FOUR 002838ND | 0 1 2 : | 3 4 | | Ex Drop | | | Matl Corrugated | 1 |
| I/I evidence Mortar, "boot", or other seal Pipe cracked Roots Intrusion New N/A Basin Connecting MH FOUR 002838ND MILE RUN Pipe Seal Condition | 0 1 2 : | 3 4 | | ix Drop | | | Matl Corrugated | 1 |
| I/I evidence Mortar, "boot", or other seal Pipe cracked Roots Intrusion New N/A Basin Connecting MH FOUR 002838ND Pipe Seal Condition I/I evidence | 0 1 2 : | 3 4 | | x Drop | | | Matl Corrugated | 1 |
| I/I evidence Mortar, "boot", or other seal Pipe cracked Roots Intrusion New N/A Basin Connecting MH FOUR 002838ND Pipe Seal Condition I/I evidence Mortar, "boot", or other seal | 0 1 2 : | 3 4 | | ex Drop | | | Matl Corrugated | 1 |
| I/I evidence Mortar, "boot", or other seal Pipe cracked Roots Intrusion New N/A Basin Connecting MH FOUR 002838ND Pipe Seal Condition I/I evidence | 0 1 2 : | 3 4 | | ix Drop | | | Matl Corrugated | 1 |

Basin No. FOUR MILE RUN

Manhole No 000393SMH

Photos Photo Name Old Photo Name Description PhotoType 000393SMH_Topside_20120309_5988.JPG Topside 0947431J.JPG



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000393SMH_Cover_20120309_5989.JPG

Cover 0947501J.JPG L:\PROJECTS\City of Alexandria\125129 - Four Shed Survey and Modeling\VPS Inspec

000393SMH_Frame_20120309_5990.JPG

0948341J.JPG Frame L:\PROJECTS\City of Alexandria\125129 - Four Shed Survey and Modeling\VPS Inspec



000393SMH_Chimney-Shaft_20120309_5991.J

Chimney-Shaft 0948411J.JPG



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000393SMH_General_20120309_5993.JPG

INCOMING PIPE FROM 000390SMH*

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INCOMING PIPE FROM 000390SMH*

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Basin No

FOUR MILE RUN

Manhole No 000393SMH

000393SMH_General_20120309_5995.JPG

SIZE OF INCOMING PIPE FROM 000392SMH

General

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General

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INCOMING PIPE FROM 000392SMH

General

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SIZE OF INCOMING PIPE FROM 002829ND

General

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INCOMING PIPE FROM 002829ND

General

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INCOMING PIPE FROM 002829ND

General

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INCOMING PIPE FROM 002829ND

General

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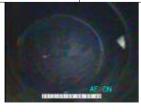


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INCOMING PIPE FROM 002829ND

General

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Basin No. FOUR MILE RUN

Manhole No 000393SMH

000393SMH_General_20120309_6003.JPG

SIZE OF OUTGOING PIPE TO 000369SMH

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OUTGOING PIPE TO 000369SMH 000393SMH_General_20120309_6004.JPG

General

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OUTGOING PIPE TO 000369SMH

General

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000393SMH_General_20120309_6006.JPG

OUTGOING PIPE TO 000369SMH

General

0956511J.JPG



| Alexandria Mai | nhole and Lamping Ir | nspec | ction Form | | Basin No. FOU | R MIL | E RUN | Manhole N | 000374 | SMH | | |
|---|------------------------------------|--------------|-------------------------|--------|--------------------------|------------|--------------|---|-------------------------------|----------|--------------------|-----------------|
| Inspection Information | | Manh | ole Information | | | | ✓ Complet | te Quick | Incor | nplete | Ret | urned |
| insp Date/Time | 3/9/2012 | Struc | cture Type | Mar | hole Standard | اك | | ion Setting Info | | | | |
| Ciew | Fruck 1 | Coat | ing/Liner Type | . — | e - No Coating/Lining |) | • | rface Type | Asphalt | | | |
| Crew Allillation | Field1 | Addr | | J | G ST | | | Volume | Medium/ | Fair | | |
| remit No _ | /08093003 Routine assessment/asse | • | State, Zip | _ | kandria,VA 00000 | | Traffic | | 3 - 4 Lan | | | |
| Insp Purpose Inspection Type | Surface Inspection | | tion Code | | t Highway Rural Stre | et | Weathe | | Dry | | | |
| Why not Inspected | Surface inspection | X | 11879535.4 | | Y 6992596.499 | | Ground | d Cond | Dry | | | |
| Owner Information | | Elev | | 138 | .95 | | | | | | | |
| Project No. | | | le (0, + , -) | | / | | Manhole- | • • | | 0 1 | 2 | 3 4 |
| Project No. 2 | | | Type pipe length(ft) | | | | Corrosi | on deterioration on Coating/lining d | | v | 4 H k | $\dashv H$ |
| Project Name | | | h to MH Invert(ft | 20.0 |) | | Manhole- | | eterioration | 0 1 | | 3 4 |
| Map No | | | cleaning | _ | Pre-Cleaning | | Corrosi | on deterioration | | V | 4 | $\dashv \vdash$ |
| Use of Sewer | Stormwater | 110 | sicuring | 140 1 | Te oleaning | | | Coating/lining d | eterioration | | ا لــا لـ | |
| | ment Ring / Cover In | sert | | F | rame cont. | | | | mber (W | all) co | | |
| No Cover | ✓ No Cover Insert | | Frame Cracked / brok | en / d | 0 1 2 eteriorated ✓ ☐ | 2 3 | 4 Cha | amber | Cracke | o | 1 2 | 3 4 |
| No Cover Gasket | No Cover Adjustment I | Ring | | | ted,spalled 🗸 🗌 | | | Corroded, | , pitted,spalle | ed 📙 📗 | | |
| Cover Type | Solid | | Missing Bolts | or Br | | +H | \square | Bricks displac | Mortar missi | | $\exists \exists$ | HH |
| Cover material | Cast-In-Place Concrete | | | | Offset 🗸 📗 📗 | 1 H | | | Roots Intrusi | | = = | HH |
| | | | Frame Base Sea | | 0 1 2 | 2 3 | 4 | | Grea | | | |
| | | | | | eteriorated | , H | $H \sqcup I$ | | Utility condu Offset or Se | | \dashv | HH |
| Cover Diam(ft) | 24 | | | Root | ts Intrusion 🗸 🗌 | | | 00 | Collaps | se 🗹 🛚 | | |
| Cover Width(ft) | | | | | l evidence 🗌 🗸 🗌 | | | Lift hole | plugs missii | | | HH |
| Cover Thickness(| · ' | | | | Shaft) / Grade R | ling | | | | | | |
| No of vent holes | (:-) | | Re | | er (Cone, Slab) | | | | Bend Step | | | |
| Avg vent hole dia | | | | | amber (Wall) | | | C | عاد) hannel | | | |
| Adj ring height(in) Cover bear surf di | | | No Chimney (S | | | | | No Bench | ranner (| No Steps | ; | |
| Ponding depth(ft) | iaii/widii | | No Chimney (S | snait) | ✓ No Reducer (Co | one, Sia | ✓ | No Channel | | No Comr | non MH F | Partition |
| Tributary area(sq | ft) | | Ma | terial | Diam in Width in | Dept | h ft | | | | | |
| | , | | | | | · | | | | | | |
| Cover | 0 1 2 3 | 4 | | | | 1 | s | Surcharge Dep | th(ft) | | | |
| _ | or Displaced deteriorated | H | Chimney 5 | | | 2.4 | | | | | | |
| | Fit in Frame 🗹 🔲 🔲 | | | | | | | | | | | |
| Corroded, pi | itted,spalled 🗸 📗 📗 urface wear | H | Chamber 5 | | | 18.5 | | | | | | |
| Missing Bolts or B | | | | | | | | | | | | |
| | | | Chimney (Shaft) | | 0 1 2 rious rehab ✔ 🗌 | 2 3 | 4 | | | | | |
| | | | | | Cracked | \Box | | | | | | |
| | | | Corrode | | ted,spalledtar missing 🗸 | | H | | | | | |
| | | | Bricks disp | laced | or missing 🗸 🗌 | ij | | | | | | |
| | | | | Root | ts Intrusion 🗸 📗 📗 | 4 | H | | | | | |
| | | | | I/ | l evidence | 5 | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Frame | and Frame Seal | | | | | | | | | | | |
| ☐ No Frame | No Frame Base Se | eal | | | | | | | | | | |
| From a restantal | | | | | | | | | | | | |
| Frame material | 3 f diam(in) | | | | | | | | | | | |
| Frame bearing sur | | $=\parallel$ | | | | | | | | | | |
| Frame bearing sur Frame bearing sur | | | | | | | | | | | | |
| Frame offset dist(ii | | $-\parallel$ | | | | | | | | | | |
| Frame depth(in) | 8 | $-\parallel$ | | | | | | | | | | |
| Frame seal materia | | | | | | | | | | | | |
| Clear opening dian | | = | | | | | | | | | | |
| Clear opening widt | ` ' | | | | | | | | | | | |



| Alexandria Manhole and Lamping Inspection Form | Basin No. | FOUR MILE RUN | Manhole No 000374SMH | |
|--|----------------|---------------|----------------------|--|
| | Notes / Sketch | | | |

| New | N/A | Basin | | Flow Direction | Pipe Type | In Drop I | Ex Drop | Depth | Shape | Matl | Dia |
|-----------|--------|------------------|---------------|---------------------|------------|----------------|----------|-----------|----------|------------------------|----------|
| • | | FOUR MILE RUN | 004040SMH | ✓ In ☐ Out | Storm | | ✓ | 9.3 | Circular | Reinforced Concrete | 24 |
| Pipe S | Seal | Conditio | on | Severity | | | | | | | |
| I/I evide | ence | | | 0 1 2 3 | 4 | | | | | | |
| | | t", or other s | seal | | | | | | | | |
| Pipe cra | acked | 1 | | | | | | | | | |
| Roots I | ntrusi | on | | | | | | | | | |
| New | N/A | Basin | Connecting MH | Flow Direction | Pipe Type | In Drop I | Ex Drop | Depth | Shape | Matl | Dia |
| • | | FOUR MILE RUN | 000371SMH | ✓ In ☐ Out | Storm | | ✓ | 9.3 | Circular | Reinforced Concrete | 30 |
| Pipe S | Seal | Condition | | Severity | / | | • | | • | | |
| | | | | 0 1 2 3 | 4 | | | | | | |
| I/I evide | | | | | | | | | | | |
| | | t", or other s | seal | | | | | | | | |
| Pipe cra | acked | i | | | | | | | | | |
| Roots I | ntrusi | on | | ✓ □ □ □ | | | | | | | |
| New | N/A | Basin | | Flow Direction | Pipe Type | In Drop I | Ex Drop | Depth | Shape | Matl | Dia |
| • | | FOUR MILE RUN | 000369SMH | ✓ In ☐ Out | Storm | | | 20.3 | Circular | Reinforced Concrete | 60 |
| Pipe S | Seal | Condition | on | Severity 0 1 2 3 | | | | | | | |
| I/I evide | ence | | | | 1 | | | | | | |
| Mortar, | "boot | t", or other s | seal | | - — 1 П | | | | | | |
| Pipe cra | acked | <u> </u> | | | 1 🗆 | | | | | | |
| Roots I | ntrusi | on | | | | | | | | | |
| New | N/A | Basin | Connecting MH | I Flow Direction | Pipe Type | In Drop I | Ex Drop | Depth | Shape | Matl | Dia |
| • | | FOUR MILE RUN | 000186ND | ☐ In 🕢 Out | Storm | | | 20.9 | Circular | Reinforced Concrete | 60 |
| Pipe S | | Condition | | Severity | | | | | | | |
| I/I evide | ence | | | 0 1 2 3 | 4 | | | | | | |
| Mortar, | "boot | t", or other s | seal | | | | | | | | |
| Pipe cra | acked | i | | | | | | | | | |
| Roots I | ntrusi | on | | | | | | | | | |
| New | N/A | Basin | Connecting MH | Flow Direction | Pipe Type | In Drop I | Ex Drop | Depth | Shape | Matl | Dia |
| • | | FOUR MILE RUN | 002839ND | ✓ In ☐ Out | Storm | | • | 4 | Circular | Reinforced Concrete | 15 |
| Pipe S | Seal | Conditio | | Severity 0 1 2 3 | | Lamping C | | | | | Dietonos |
| I/I evide | ence | | | 0 1 2 3 | · + | SCREAM Def | | eral Rema | ark - | | Distance |
| | | t", or other s | seal | | | Description: 0 | • | | | | |
| Pipe cra | | | | |] [] | | | | | | |
| Roots I | | | | | | | | | | | |

Basin No. FOUR MILE RUN

Manhole No 000374SMH

Photos Photo Name Old Photo Name Description PhotoType 000374SMH_Cover_20120309_6036.JPG Cover 1036061J.JPG L:\PROJECTS\City of Alexandria\125129 - Four Shed Survey and Modeling\VPS Inspec



000374SMH_Frame_20120309_6037.JPG

Frame

1036381J.JPG

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000374SMH_Chimney-Shaft_20120309_6038.J

1036551J.JPG Chimney-Shaft

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000374SMH_General_20120309_6039.JPG

SIZE OF INCOMING PIPE FROM 002839ND

General

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INCOMING PIPE FROM 002839ND

General

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INCOMING PIPE FROM 002839ND

General

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000374SMH_General_20120309_6042.JPG

SIZE OF INCOMING PIPE FROM 004040SMH

General

1038191J.JPG



Basin No.

FOUR MILE RUN

Manhole No 000374SMH

General 1038251J.JPG

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NCOMING PIPE FROM 004040SMH

NCOMING PIPE FROM 004040SMH

General

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NCOMING PIPE FROM 004040SMH

General

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SIZE OF INCOMING PIPE FROM 000371SMH

General

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General

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INCOMING PIPE FROM 000371SMH

General

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INCOMING PIPE FROM 000371SMH

General

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INCOMING PIPE FROM 000371SMH

General

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Basin No.

FOUR MILE RUN

Manhole No 000374SMH



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General

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INCOMING PIPE FROM 000369SMH

General

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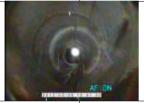
000374SMH_General_20120309_6054.JPG

OUTGOING PIPE TO 000186ND

General

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OUTGOING PIPE TO 000186ND

General

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OUTGOING PIPE TO 000186ND

General

1041411J.JPG



| Alexandria Ma | nhole and Lamping Ir | spe | ction Form | | Basin No. | FOUR I | MILE | RUN | Manhole N | lo 0003695 | HM | | |
|-------------------------------------|------------------------------------|--------------|---------------------------------------|---------|--------------------------|--------------|------------|------------|----------------------------------|---------------------------------|------------|------------------------|-----------|
| Inspection Information | | Manh | nole Information | | | | | Complete | Quick | ☐ Incor | nplete | Re | turned |
| insp Date/Time | 3/9/2012 | Struc | cture Type | Man | hole Standard | | | • | n Setting Infor | | • | | |
| Ciew | Fruck 1 | Coat | ing/Liner Type | . — | e - No Coating/Li | ining | | • | ace Type | Asphalt | | | |
| Crew Amiliation | Field1 | Addr | | l | G ST | | | Traffic V | ٠. | Medium/I | air | | |
| L GIIIII INO | /08093003 Routine assessment/asse | | State, Zip | _ | andria,VA 00000 | | | Traffic T | | 3 - 4 Lan | | | |
| Insp Purpose Inspection Type | Surface Inspection | | tion Code | | t Highway Rural | | | Weather | | Dry | | | |
| Why not Inspected | Surface inspection | X | 11879481.63 | | Y 6992565.37 | 77 | | Ground (| Cond | Dry | | | |
| Owner Information | | | ation | 137. | 88 | | | | | | | | |
| Project No. | | | le (0, + , -) | | / | | ı | Manhole-U | • | | 0 (| 1 2 | 3 4 |
| Project No. 2 | | | Type | | | | | | deterioration vocating/lining de | | y [| $\dashv \vdash \vdash$ | HH |
| Project Name | | | oipe length(ft) :h to MH Invert(ft | 16.2 | | | ı | Manhole-Lo | | eterioration | 0 1 | 1 2 | 3 4 |
| Map No | | | cleaning | - | Pre-Cleaning | | | | deterioration v | | v | | |
| Use of Sewer | Stormwater | 1 10-1 | clearling | 140 1 | re-cleaning | | | <u> </u> | Coating/lining d | eterioration | ✓ L | | |
| Cover / Adjust | ment Ring / Cover In: | sert | | Fr | ame cont. | | | | | mber (W | all) co | | |
| No Cover | ✓ No Cover Insert | | Frame Cracked / brok | on / de | 0 1 eteriorated ✓ | 1 2 | 3 4 | Chan | nber | Cracke | ω O [| 1 2 | 3 4 |
| ✓ No Cover Gasket | No Cover Adjustment F | Ring | | | ed,spalled | | ╏ | _ | Corroded, | pitted,spalle | | | |
| Cover Type | Heavy Duty | | Missing Bolts | or Br | |] | |] | | Mortar missir | | $\exists \; \Box$ | |
| Cover material | Concrete Segments (bo | lte | | | Offset 🗸 🛮 | | HF | | Bricks displac | ced or missir Roots Intrusic | | 러님 | HH |
| | <u> </u> | | Frame Base Sea | | 0 1 | 1 2 | 3 4 | _ | | Greas | se 🔽 [| | |
| | | | | | eteriorated ed,spalled | | dash | - | | Utility condu Offset or Se | | $\dashv \vdash$ | HH |
| Cover Diam(ft) | 24 | | Corrode | | s Intrusion | | | <u> </u> | JOHIL | Collaps | | $\exists \ \exists$ | |
| Cover Width(ft) | | | | 1/1 | evidence | | | | Lift hole | plugs missir | | $\exists \Box$ | |
| Cover Thickness(| in) 3.25 | | Chimn | ey (| Shaft) / Grad | e Rin | g | | | I/I evidend | | ✓ □ | |
| No of vent holes | 2 | | Re | duc | er (Cone, Sla | ab) | | | | Bend | | | |
| Avg vent hole dia | | | | | mber (Wall) | | | | | Step | | | |
| Adj ring height(in) | | | ✓ No Chimney (S | | | | | JZ N | lo Bench | hannel (| No Step | s | |
| Cover bear surf d | iam/width | | No Chimney (S | Shaft) | ✓ No Reduc | cer (Cone, | , Slab) | | lo Channel | - | No Com | | Partition |
| Ponding depth(ft) Tributary area(sq | ft) | | Ma | tarial | Diam in Widt | hin D | anth f | | | | _ | | |
| Tributary area(sq | 11) | | Ivia | lenai | Diam in Widt | ט ווווו. | ерит | | | | | | |
| Cover | 0 1 2 3 | 4 | | | | | | Su | rcharge Dept | th(ft) | | | |
| Missing of | or Displaced 🗸 🗌 🗎 | | Chimney 5 | | | 3. | .8 | | Torial go Dop | (11) | | | |
| | deteriorated 🗸 📗 📗 Fit in Frame | H | | | | | | | | | | | |
| Corroded, pi | itted,spalled 🗸 🗌 🔲 | | Oh a sah a sa | | 7 | 4 | 2.5 | $\neg $ | | | | | |
| S Missing Bolts or B | urface wear | H | Chamber 5 | | | 14 | 2.5 | _ | | | | | |
| Wildsing Boils of E | NORCH BOILS 🕶 🔛 | | Chimney (Shaft) | | 0 1 | 1 2 | 3 4 | | | | | | |
| | | | | Previ | ious rehab 🗸 📗 | | ᆔᅡ | ┥ | | | | | |
| | | | Corrode | | ed,spalled | | | | | | | | |
| | | | Bricks disp | | ar missing 🗸 📗 | | $H \vdash$ | - | | | | | |
| | | | Brioke diop | | s Intrusion | | | <u> </u> | | | | | |
| | | | | 1/1 | Collapse evidence | , | HF | - | | | | | |
| | | | | 1/1 | evidence | | | _ | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Frame | and Frame Seal | | | | | | | | | | | | |
| ☐ No Frame | No Frame Base Se | eal | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Frame material | 3 | | | | | | | | | | | | |
| Frame bearing sur | | | | | | | | | | | | | |
| Frame bearing sur | | | | | | | | | | | | | |
| Frame bearing sur | | | | | | | | | | | | | |
| Frame offset dist(ii | * | | | | | | | | | | | | |
| Frame depth(in) | 8 | | | | | | | | | | | | |
| Frame seal materi | | $=\parallel$ | | | | | | | | | | | |
| Clear opening widt | ` ' | | | | | | | | | | | | |



| Alexandria Manhala and Lampina | . Inchestic | n Form | Basin No. FOL | JR MILE R | PLIN | Manhol | e No 000369SMH | |
|--------------------------------|----------------|-----------|---------------|--------------|--------|------------|------------------------|-----|
| Alexandria Manhole and Lamping | Inspection | | | JIN WIILE IN | NOIN . | IVIAIIIIOI | C 140 0003030WII 1 | |
| | | Notes | s / Sketch | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| New N/A Basin Connecting MH FI | low Direction | Pipe Type | In Drop Ex | Drop De | epth | Shape | Matl | Dia |
| FOUR 000393SMH | In Out | Storm | | 15 | 5.8 | Circular | Reinforced | 60 |
| — MILE RUN | Severi | tv | | | | | Concrete | |
| Pipe Seal Condition | | 3 4 | | | | | | |
| I/I evidence | | - | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| | | | | | | | | |
| Pipe cracked | | | | | | | | |
| Roots Intrusion | | | | | | | | |
| New N/A Basin Connecting MH FI | ow Direction | Pipe Type | In Drop Ex | Drop De | epth | Shape | Matl | Dia |
| FOUR 000374SMH MILE RUN |] In 🕢 Out | Storm | | 16 | 6.2 | Circular | Reinforced Concrete | 60 |
| Pipe Seal Condition | Severi | ty | | | | | | |
| | 0 1 2 | 3 4 | | | | | | |
| I/I evidence | ✓ □ □ [| | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |

Pipe cracked Roots Intrusion Basin No. FOUR MILE RUN

Manhole No 000369SMH

Photos Photo Name Old Photo Name Description PhotoType 000369SMH_Topside_20120309_6021.JPG 1019051J.JPG Topside

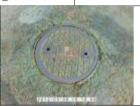


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000369SMH_Cover_20120309_6022.JPG

Cover 1019091J.JPG

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000369SMH_Frame_20120309_6023.JPG

1019401J.JPG Frame

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000369SMH_Chimney-Shaft_20120309_6024.J

Chimney-Shaft 1019491J.JPG

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000369SMH_General_20120309_6025.JPG

UNDERDRAIN

General

1020291J.JPG

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000369SMH_General_20120309_6026.JPG

UNDERDRAIN

General

1020341J.JPG

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000369SMH_General_20120309_6027.JPG

SIZE OF INCOMING PIPE FROM 000393SMH

General

1021561J.JPG



Basin No.

FOUR MILE RUN

Manhole No 000369SMH

000369SMH_General_20120309_6028.JPG INCOMING PIPE FROM 000393SMH

1022041J.JPG L:\PROJECTS\City of Alexandria\125129 - Four Shed Survey and Modeling\VPS Inspec



INCOMING PIPE FROM 000393SMH 000369SMH_General_20120309_6029.JPG

General

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000369SMH_General_20120309_6030.JPG

INCOMING PIPE FROM 000393SMH

General

1022221J.JPG

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000369SMH General 20120309 6031.JPG

SIZE OF OUTGOING PIPE TO 000374SMH

General

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000369SMH_General_20120309_6032.JPG

OUTGOING PIPE TO 000374SMH

General

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000369SMH_General_20120309_6033.JPG

OUTGOING PIPE TO 000374SMH

General

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000369SMH_General_20120309_6034.JPG

OUTGOING PIPE TO 000374SMH

General

1023221J.JPG

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000369SMH_General_20120309_6035.JPG

OUTGOING PIPE TO 000374SMH

General

1023291J.JPG



| Alexandria Ma | anhole and Lamping Ir | spec | tion Form | Basin No. FOL | JR MILE RUN | Manhole N | 009022IN | |
|--------------------------------------|---------------------------------------|----------|-------------------|--|----------------|-------------------------|---|--------------------|
| Inspection Informati | | Manh | ole Information | | ✓ Com | nplete Quick | Incomplete | Returned |
| linsh Date/Time | 3/29/2012 | Struc | ture Type | Manhole Standard | | pection Setting Info | | |
| Ciew | Truck 1 | Coati | ng/Liner Type | None - No Coating/Lining | a | Surface Type | Concrete Paver | ment |
| Ciew Aillialloii | Field1 | Addre | ess 4700 | KING ST | | ffic Volume | Low/Good | HOIR |
| Lennin Mo | V08093003 | City, | State, Zip | | | ffic Type | Parking | |
| Insp Purpose | Routine assessment/asse | | tion Code | Sidewalk | | ather | Dry | |
| Inspection Type | Surface Inspection | Χ | | Υ | | ound Cond | Dry | |
| Why not Inspected Owner Information | | Eleva | | | | | , | |
| Project No. | | | e (0, + , -) | | Manh | ole-Upper | 0 | 1 2 3 4 |
| Project No. 2 | | Flow | | | | rrosion deterioration v | | |
| Project Name | | | ipe length(ft) | | Manh | Coating/lining de | eterioration 🗹 | 1 2 3 4 |
| Map No | | | n to MH Invert(ft | | | rrosion deterioration v | widespread veterioration | |
| Use of Sewer | Stormwater | Pre-c | eleaning | No Pre-Cleaning | | Coating/lining de | eterioration <a> | |
| Cover / Adjust | tment Ring / Cover Ins | sert | | Frame cont. | | Char | nber (Wall) c | ont. |
| No Cover | ✓ No Cover Insert | | Frame | 0 1 | 2 3 4 | Chamber | 0 | 1 2 3 4 |
| No Cover Gasket | No Cover Adjustment F | Ring | | en / deteriorated 🗹 📗 🛮 d, pitted,spalled 🗸 🔲 🗍 | | Corrodod | Cracked pitted,spalled | |
| | Solid | | | or Broken Bolts | | | fortar missing | |
| Cover Type Cover material | | | | Offset 🗸 | | Bricks displac | | |
| Cover material | Cast Iron | | Frame Base Sea | Missing 🔽 🗌 | 2 3 4 | R | oots Intrusion Grease | HHHH |
| | | | | ed / deteriorated 🗹 🗌 | | ι | Utility conduit | |
| Cover Diam(ft) | 21 | | Corrode | d, pitted,spalled | | Joint (| Offset or Seal | |
| Cover Width(ft) | 21 | | | Roots Intrusion I/I evidence | $\dashv H H I$ | Lift hole | Collapse V plugs missing V | HHHH |
| Cover Thickness | (in) 3.25 | | Chimp | ey (Shaft) / Grade F | Ping | 2 | I/I evidence | |
| No of vent holes | 2 | | | | | | Bench | |
| Avg vent hole dia | | | | ducer (Cone, Slab) | | | Steps | |
| Adj ring height(in) | ` ' | | ✓ No Chimney (S | Chamber (Wall) Shaft) No Chimney (S | Shaft) Seal | CI | hannel (Inver | t) |
| Cover bear surf d | · I II | | ✓ No Grade Ring | | | ✓ No Bench | No Ch | |
| Ponding depth(ft) |) | | (| V | . , | No Steps | ✓ No Co | ommon MH Partition |
| Tributary area(sq | (ft) | | Mat | terial Diam in Width in | Depth ft | | | |
| | · · I | , | | | | Steps material | Plastic/Ste | eel Composite |
| Cover | 0 1 2 3 | 4 | | | | Surcharge Dept | h(ft) | |
| | or Displaced 🗸 📗 📗 deteriorated 🗸 📗 📗 | H | | | | | | <u> </u> |
| | Fit in Frame | | | | | | | |
| | pitted,spalled 🗸 🗌 🗎 | | Chambar | | 19.2 | Channel materia | l Corrugated | d Metal |
| Missing Bolts or E | Surface wear Broken Bolts | HI | Chamber 5 | | 19.2 | Steps | 0 | 1 2 3 4 |
| Wildowing Bolto of E | Broken Boke (E | | | | | Broken / missing | / deteriorated vitted spalled | |
| | | | | | | Channel | pitted,spalled 0 | 1 2 3 4 |
| | | | | | | | Cracked 🗸 | |
| | | | | | | | pitted,spalled V lortar missing V | |
| | | | | | | Bricks displac | · — | |
| | | | | | | R | oots Intrusion | |
| | | | | | | Deb | Grease V oris/deposition | HHHH |
| | | | | | | Pipe segment cra | | |
| | | | | | | | Hydraulic flow I/I evidence | HHHH |
| | | | | | | | I/I evidence | |
| - Fram- | and Frame Seel | | | | | | | |
| | e and Frame Seal | nol. | | | | | | |
| No Frame | No Frame Base Se | al | | | | | | |
| Frame material | 3 | $\neg $ | | | | | | |
| Frame bearing sur | | | | | | | | |
| Frame bearing sur | ' ' | = | | | | | | |
| Frame bearing sur | | | | | | | | |
| Frame offset dist(i | | | | | | | | |
| Frame depth(in) | 4 | | | | | | | |
| Frame seal materi | ial 39 | | | | | | | |
| Clear opening dia | | | | | | | | |
| Clear opening wid | ` ' | | | | | | | |



| New N/A Basin Connecting MH FI | ow Direction | Pipe Type | In Drop E | x Drop | Depth | Shape | Matl | Dia |
|--|--------------|-----------|-----------|--------|-------|----------|---------------------|-----|
| FOUR 009023IN V | In Out | Storm | | | 19.2 | Circular | Corrugated Metal | 72 |
| Pipe Seal Condition Severity | | | | | | | | |
| | 0 1 2 | 3 4 | | | | | | |
| I/I evidence | | | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| Pipe cracked | | | | | | | | |
| Roots Intrusion | | | | | | | | |
| New N/A Basin Connecting MH Flow Direction Pipe Type | | Pipe Type | In Drop E | x Drop | Depth | Shape | Matl | Dia |
| FOUR 000393SMH MILE RUN | In 🗹 Out | Storm | | | 19.2 | Circular | Corrugated Metal | 84 |
| Pipe Seal Condition | Sever | ity | | | | | | |
| 0 1 2 3 4 | | | | | | | | |
| I/I evidence | | | | | | | | |
| Mortar, "boot", or other seal | | | | | | | | |
| Pipe cracked | | | | | | | | |
| Roots Intrusion | | | | | | | | |



Basin No. FOUR MILE RUN

Manhole N 009022IN

Photos

Photo Name 009022IN_Topside_20120329_1850.JPG Description

PhotoType Topside

Old Photo Name 0909431J.JPG

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009022IN_Cover_20120329_1851.JPG

0909481J.JPG

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009022IN_Frame_20120329_1852.JPG

Frame

0910051J.JPG

009022IN_Chamber_20120329_1853.JPG

Chamber

0910391J.JPG

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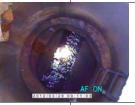


009022IN_Chamber_20120329_1854.JPG

Chamber

0911031J.JPG

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009022IN_Chamber_20120329_1855.JPG

Chamber

0911071J.JPG

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009022IN_General_20120329_1856.JPG

SIZE OF UNDERDRAIN

General

0912391J.JPG



Basin No.

FOUR MILE RUN

Manhole N 009022IN

UNDERDRAIN 009022IN_General_20120329_1857.JPG 0912481J.JPG



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009022IN_General_20120329_1858.JPG

UNDERDRAIN

General

0912581J.JPG

009022IN_General_20120329_1859.JPG

UNDERDRAIN

General

0913021J.JPG

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009022IN General 20120329 1860.JPG

SIZE OF INCOMING PIPE FROM 009023IN

General

0925341J.JPG

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009022IN_General_20120329_1861.JPG

INCOMING PIPE FROM 009023IN

General

0925411J.JPG

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INCOMING PIPE FROM 009023IN

General

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INCOMING PIPE FROM 009023IN

General

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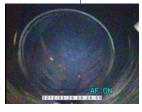
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INCOMING PIPE FROM 009023IN

General

ReviewID: 100

0926051J.JPG



Basin No. FOUR MILE RUN

Manhole N 009022IN

009022IN_General_20120329_1865.JPG

SIZE OF OUTGOING PIPE TO 000393SMH

0926341J.JPG

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009022IN_General_20120329_1866.JPG

OUTGOING PIPE TO 000393SMH

General

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009022IN_General_20120329_1867.JPG

OUTGOING PIPE TO 000393SMH

General

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OUTGOING PIPE TO 000393SMH

General

0926491J.JPG

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